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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/554,025	06/15/2000	CHRISTOPH DORR	TRW(EHR4846	6556

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TAROLLI SUNDHEIM COVELL
TUMMINO & SZABO
1111 LEADER BUILDING
CLEVELAND, OH 44114-1400

EXAMINER

GARCIA, ERNESTO

ART UNIT PAPER NUMBER

3629

DATE MAILED: 01/23/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .		Applicant(s)	
	09/554,025		DORR, CHRISTOPH	
	Examiner		Art Unit	
	Ernesto Garcia		3629	

-- Th MAILING DATE of this communication appears on the cover sheet with the correspondenc address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 November 2001 .
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 11-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ . | 6) <input type="checkbox"/> Other: _____ . |

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the joint housing as one piece together with a chassis strut must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 11-23 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

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Claim 11 recites the limitations "the rotatable" in line 3 and "the passage" in line 9. There is insufficient antecedent basis for these limitations in the claim. Furthermore, the limitation "for the rotatable and to a limited extent tiltable support of the joint ball" in lines 3-4 is unclear.

Regarding claim 18, the limitation "may be" in line 4 makes the claim uncertain. Is the sealing bellows secured or not secured into the ring groove?

Regarding claim 20, the limitation "an inside diameter of the metal ring comprising a guide" is unclear what a guide is.

Regarding claims 12-17 and 21-23, the claim(s) depend(s) from claims 11 and 20; and, therefore become(s) indefinite.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 11, 14 and 15, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Wood, 5,697,723 (see attachment).

Regarding claim 11, Wood discloses a ball-and-socket joint having a joint pin **16**, a plastic joint housing **14**, a bearing shell **46**, and an inside diameter **77**. The joint pin **16** is provided with a joint ball **18**. The bearing shell **46** is inserted into the joint housing **14**. An inside diameter **77** of a cylindrical center part **C** of the metal ring **48** corresponds to an outside diameter **O** of the bearing shell **46**. Applicant is reminded that a functional "whereby" statement does not define any structure and accordingly can not serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

Regarding claim 14, the cylindrical center part **C** ends in an area **A** of an equator **E** of the joint ball **18**.

Regarding claim 15, the bearing shell **46** includes a pin-side area **62** provided with slits **60**, which the slits **60** extend up to an area **A** of an equator **E** of the joint ball **18**.

Claims 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by Hamilton, 3,384,396.

Regarding claim 20, as best understood, Hamilton discloses in Figure 5 a ball-and-socket joint comprising a joint pin **16**, a bearing shell **14**, a joint housing **10**, and a metal ring **28**. The joint pin **16** has a joint ball **20**. The bearing shell **14** is rotatable and

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tiltable to a limited extent relative to the bearing shell **14**. The joint housing **10** has an opening **O**. The metal ring **28** has a cylindrical portion **C** protruding from the opening **O** and the cylindrical portion **C** forms a passage **P** receiving the bearing shell **14**. The metal ring **28** has an inside diameter **d**. The metal ring **28** also has a radially inwardly bent end segment **28a**.

Regarding claim 21, Hamilton discloses the metal ring **28** further includes a radially outwardly flange portion **F** extending into the joint housing **10** and embedded in the joint housing **10**.

Regarding claim 22, Hamilton discloses the joint ball **20** has an equator **22d**. The flange portion **F** extends into the joint housing **10** at a location near the equator **22d**.

Claims 11 and 18, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by Pazdirek et al. (see attachment).

Regarding claim 11, Pazdirek et al. discloses in claim 3 a ball-and-socket joint having a joint pin **20**, a plastic joint housing **12**, a bearing shell **36**, and an inside diameter **I**. The joint pin **20** is provided with a joint ball **22**. The bearing shell **36** is inserted into the joint housing **12**. An inside diameter **I** of a cylindrical center part **28** of the metal ring **26** corresponds (closely matches) to an outside diameter **O** of the bearing shell **36**.

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Applicant is reminded that a functional "whereby" statement does not define any structure and accordingly cannot serve to distinguish. *In re Mason*, 114 USPQ 127, 44 CCPA 937 (1957).

Regarding claim 18, Pazdirek et al. discloses an area **F** of an opening **O** of the joint housing **12** is provided with a ring groove **P** into which a ball-side end **b** of a sealing bellows **46** is secured.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pazdirek et al., 5,609,433, in view of Hamilton 3,384,396.

Regarding claim 12, Pazdirek et al. fails to disclose the metal ring **26** having a radially outwardly angled flange **34** that is extrusion-coated with material of the joint housing **12**. Hamilton teaches a metal ring **28** having a radially outwardly angled flange **F** to be secured to a housing (col. 3, lines 31-36). Applicant is reminded that Pazdirek

et al. teaches an extrusion-coated metal ring with material of the joint housing **12**, therefore, the teaching of the angled flange of Hamilton will result the angled flange extrusion-coated with material of the housing **12**. Therefore, as taught by Hamilton, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include an angled flange to a metal ring to secure the metal ring to a housing.

Regarding claim 13, Hamilton teaches the angled flange **F** protrudes at an approximately 90-degree angle from the cylindrical center part of the ring **28**.

Claims 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, 5,697,723, in view of Morin, 4,318,627.

Regarding claim 16, Wood '723, as discussed above, discloses the bearing shell **46** also includes a head-side area **70** facing away from the joint pin **16**. However, Wood fails to disclose the head-side area **70** provided with indentations, which extend parallel to a joint axis **30**. Morin teaches in Figure 2 a bearing shell **14** includes a head-side area **28** provided with indentations **22**, which the indentations **22** extend parallel to a joint axis **F** to avoid axial play in a ball-and-socket joint (col. 1, lines 48-55). Therefore, as taught by Morin, it would have been obvious to one of ordinary skill in the art at the time the invention was made to include indentations in a head-side area of a bearing shell to avoid axial play in a ball-and-socket joint.

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Regarding claim 17, the slits **60** and the indentations **22** are formed in the bearing shell **46**.

Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wood, 5,697,723.

Regarding claim 19, Wood, as discussed above, discloses the joint housing **14** made as one piece together with a chassis strut **24**. However, Wood fails to disclose the joint housing **14** made of plastic. Applicant is reminded that, within the general skill of a worker in the art, selecting a known material based on its suitability for the intended use is a matter of obvious design choice. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to make the joint housing of plastic. *In re Leshin*, 125 USPQ 416. Furthermore, applicant is reminded that the method of forming the joint housing by injection molding is not germane to the issue of patentability of the ball-and-socket joint itself. Therefore, this limitation has been given limited patentable weight. See MPEP ' 2113.

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hamilton, 3,384,396, in view of Pazdirek et al., 5,609,433.

Regarding claim 23, Hamilton, as discussed above, fails to disclose a ball-and-socket joint further including a sealing bellows and the joint housing **10** including a ring

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groove being located radially outwardly of the cylindrical portion **C** of the metal ring **28**. Pazdirek et al. teaches in Figure 2 a ball-and-socket joint further including a sealing bellows **46** to prevent intrusion of dust and a joint housing **12** including a ring groove **P** located radially outwardly of a cylindrical portion **28** of a metal ring **26** to secure an end of the sealing bellows **46**. Therefore, as taught by Pazdirek et al., it would have been obvious to one of ordinary skill in the art at the time the invention was made to include a sealing bellows to prevent intrusion of dust and to include a ring groove in a joint housing to secure an end of the sealing bellows.

Response to Arguments

Applicant's arguments with respect to claims 11-23 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ernesto Garcia whose telephone number is 703-308-8606. The examiner can normally be reached from 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on 703-308-1159. The fax number for the organization where this application or proceeding is assigned is 703-305-3597 for regular communications. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-2168.


Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3620

E.G.
January 16, 2002

Attachments: One page of Wood 5,697,723; and
One page of Pazdirek et al., 5,609,433.



